S.W.D. NO. 20
STORM CHANNEL IN COMOTARA INDUSTRIAL PARK

PROJECT NO.

468-76-245-80170-000-000-001

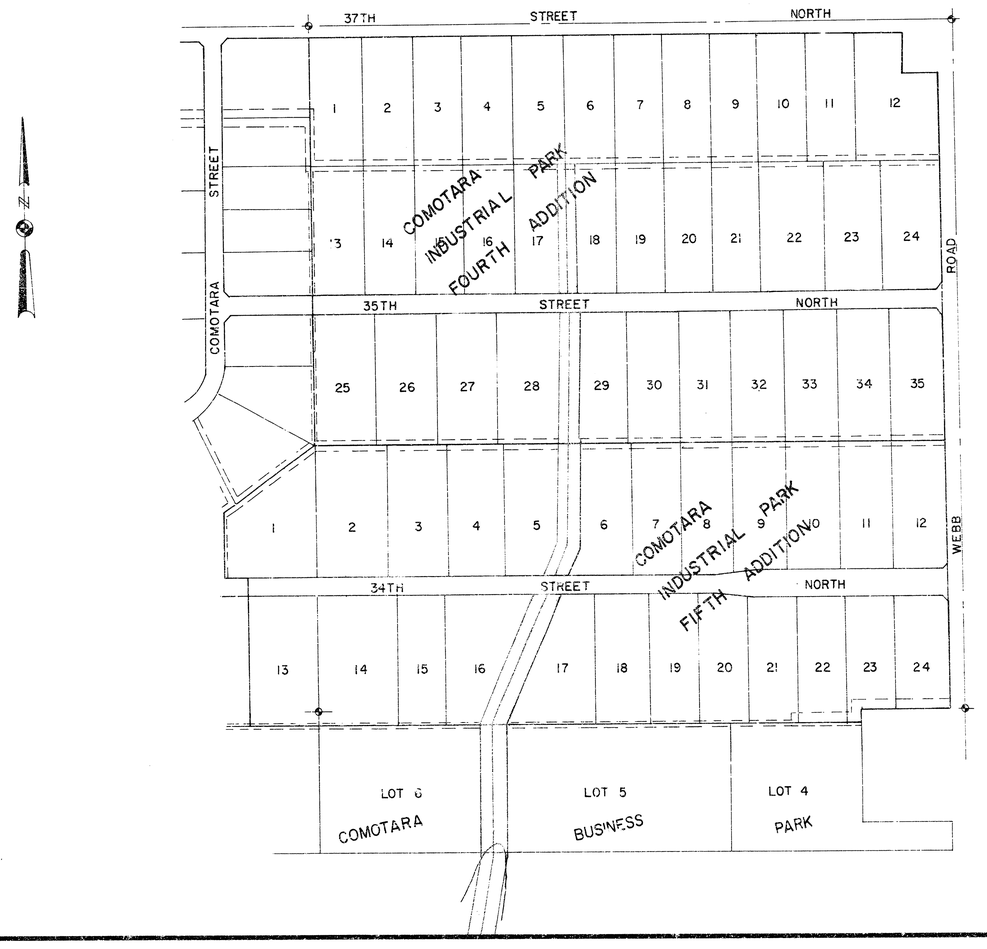
CITY OF WICHITA, KANSAS

R.W. LINN CITY ENGINEER

GENERAL NOTES

1. Excess excavated material to be disposed of on adjacent site as directed by developer, developer's engineer or site engineer.

2. FIELD ENGINEER SHALL TAKE THIS [illegible] SWITCH [illegible] DESIGNED [illegible] CONSTRUCTION [illegible] SHALL BE REPLACED TO ORIGINAL LOCATION [illegible] ENGINEER.

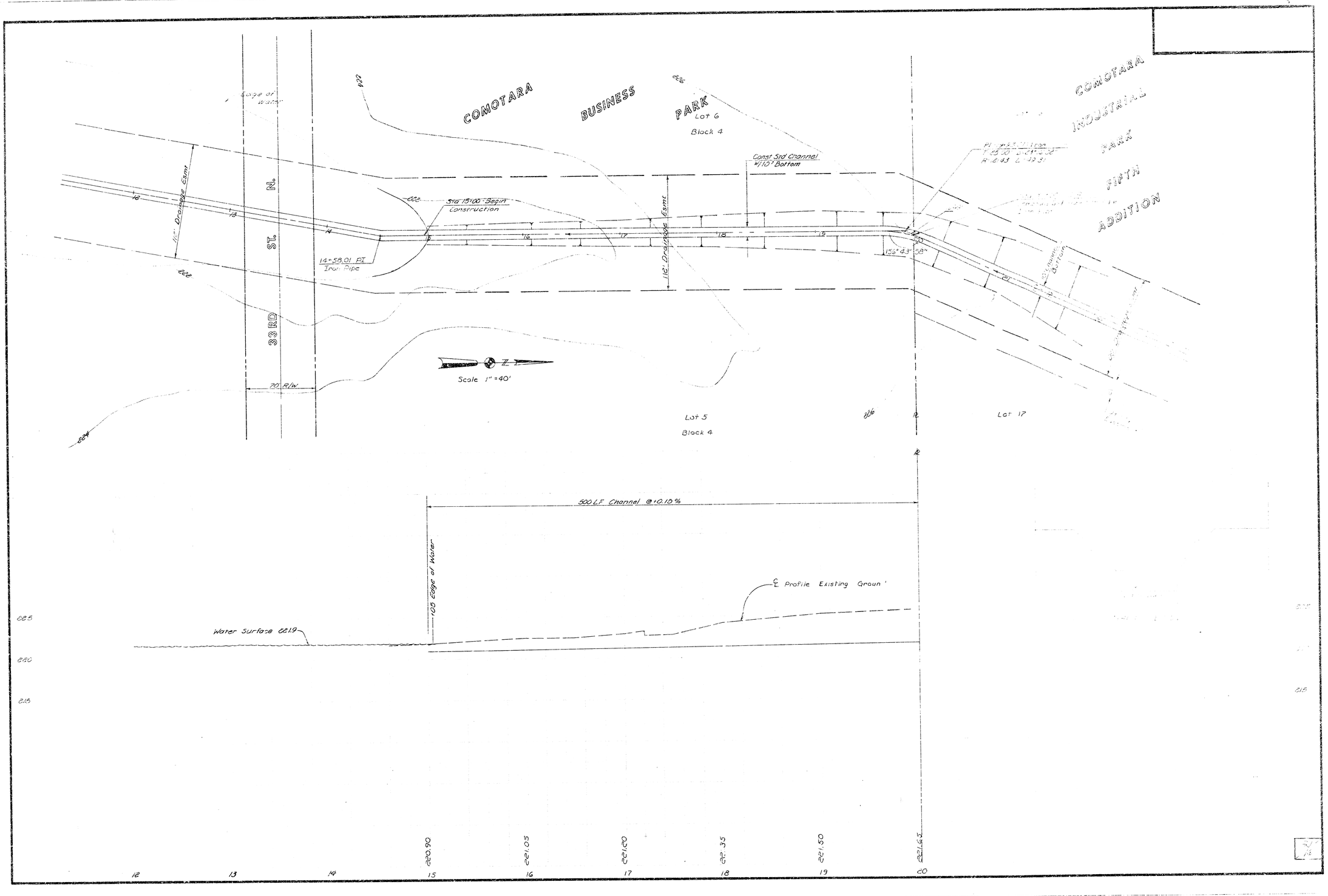


INDEX TO DRAWINGS

1	TITLE SHEET
2-4	PLAN & PROFILE
5	DITCH DETAILS
6	HEADWALL DETAIL
6a	SOIL SAVER DETAIL
7-11	CROSS SECTIONS

VAN DOREN · HAZARD · STALLINGS
ARCHITECTS · ENGINEERS · PLANNERS
WICHITA, KANSAS

SHEET 1 OF 1



COMOTARA BUSINESS PARK
Lot 6
Block 4
COMOTARA INDUSTRIAL PARK FIFTH ADDITION
Const Std Channel W/10' Bottom
Std 15+00 Begin Construction
14+58.01 PI Iron Pipe
112' Drainage Esmt
33RD ST. N.
70' R/W
Scale 1" = 40'
Lot 5
Block 4
Lot 17
500 LF Channel @ +0.15%
105 Edge of Water
℄ Profile Existing Ground
Water Surface 221.9
220.90
221.05
221.20
221.35
221.50
221.65
12
13
14
15
16
17
18
19
20

Const Std Conc. Ditch Check
Transition from 10' bottom to
8' bottom drop=1'

Scale 1"=40'

20' R.R. Drainage & Utility Esmt

Lot 16

Const Channel 7/10' Bottom

Crossroad structure & appurtenances to be constructed by others

Lot 5

Const Std Channel 7' / 10' Bottom

Const Std Conc. Ditch Check drop=1.6'

Sta 3+38.83

70' R/W

34TH STREET NORTH

COMOTARA INDUSTRIAL PARK ADDITION

Drainage Ditch

20' Utility Esmt

20' Utility Easement

Lot 17

Lot 6

P.I. 28+18.23
T=25.50' Δ=23°11'01"
R=101.88' L=49.32'

522 L.F. Channel @ 0.15%

668 L.F. Channel @ 0.60%

896 L.F. Channel @ 0.60%

Proposed 34th Street North

Const. Ditch Check

Const. Ditch Check

℄ Profile Existing Ground

℄ Profile Existing Ground

235
230
225

0	1	2	3	4	5	6	7	8	9	10	11
227.65	227.80	227.95	228.10	228.25	228.40	228.44 / 228.25	228.70	228.80	229.00	229.20 / 229.40	229.60	229.80	230.02 / 230.00

Scale: Horiz. 1" = 40'
Vert. 1" = 5'

Note Type 3 Rip Rap, 18" Rip Rap on 6" sand & gravel bedding. Size range for 18" Rip Rap shall be a maximum of 1 cubic foot and a minimum of 1/8". 6" bedding shall be a continuous layer of sand & gravel or sand & crushed rock, reasonably graded to a maximum size of 1/4".

40' | 30' | 40' Drainage & Utility Esmt.

Lot 28

Const Std Channel w/ 6' Bottom

Construct Std Conc. Ditch Check drop = 1'-0"

Crossroad structure & Appurtenances to be constructed by others

Type 3 Rip Rap See Note

Sta 31+38.03

70' R/W

NORTH 35TH STREET

Lot 17

Lot 5

Const Std Conc Ditch Check drop = 1.5'

Const Std Channel w/ 6' Bottom

Type 3 Rip Rap See Note

Sta 46+83.62

COMOTARA INDUSTRIAL PARK

FOURTH ADDITION

20' Utility Esmt

Const Conc. Headwall for 48" RCP installed by others See details Sht 6 Sta 36+60.79 = RW

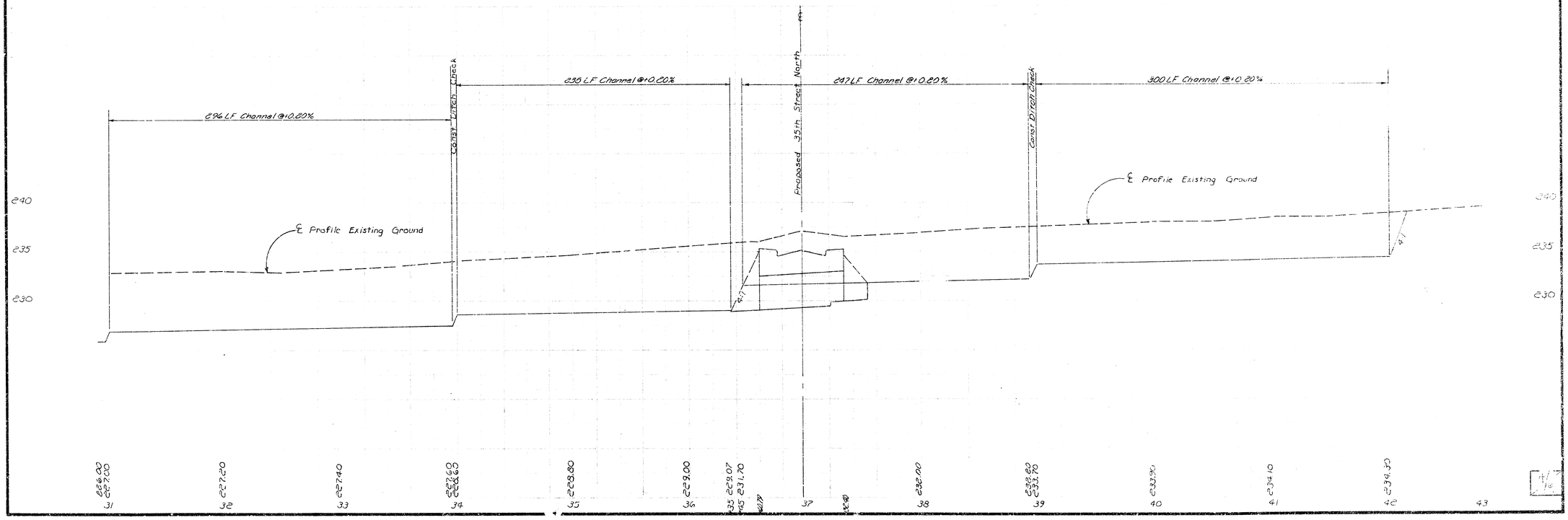
Const Conc. Headwall for 30" RCP installed by others See Detail Sht 6 & 6a Sta 37+32.90 = RW

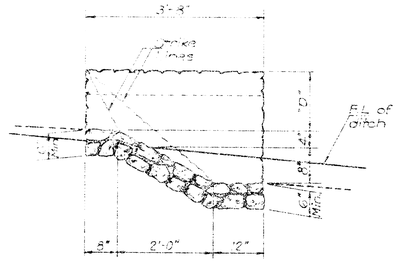
60' Drainage & Utility Esmt

Lot 29

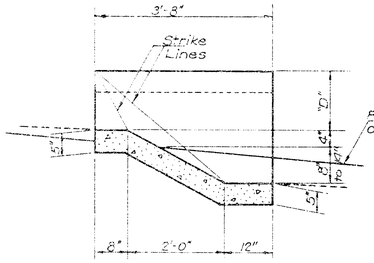
Lot 18

Lot 19



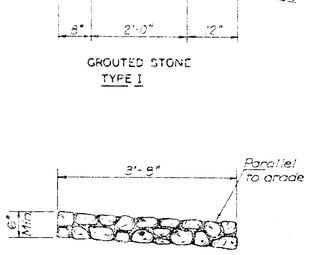


GROUTED STONE
TYPE I

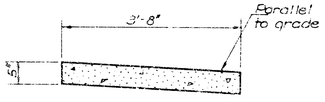


CONCRETE
TYPE 5

SECTION A-A
Without Toe Wall.



GROUTED STONE
TYPE J

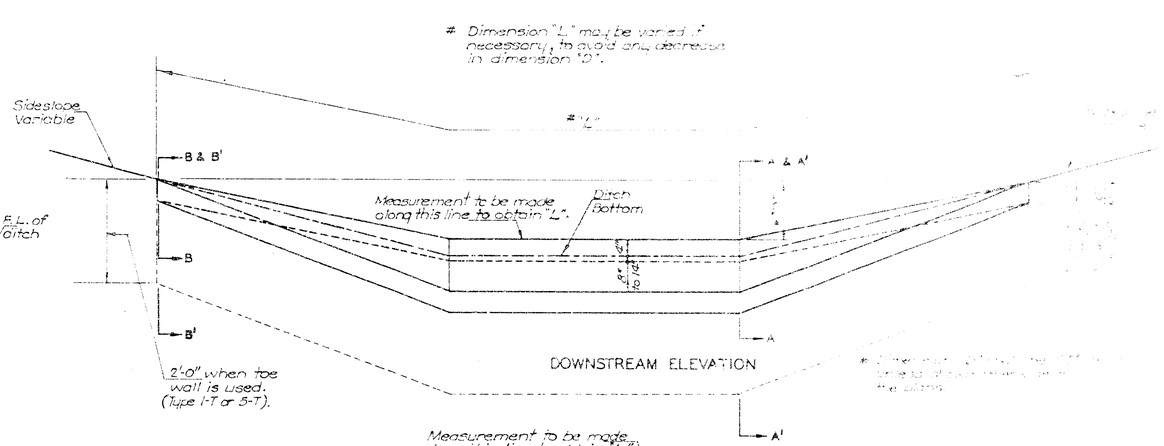


CONCRETE
TYPE 5

SECTION B-B
Same section at each end of unit.
Without Toe Wall.

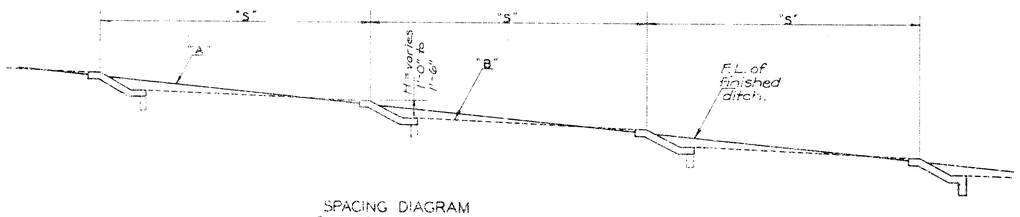
Note: The stone in all stone wash checks shall be laid in a 3" mortar bed and the spaces between stones shall be filled with mortar.

Note: Use Class 'A' concrete throuout for Type 5 & 5-T Wash Checks.

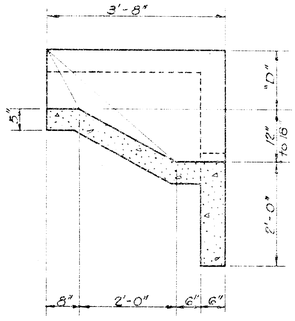


Dimension "L" may be varied if necessary, to avoid and decrease in dimension "D".

\# Dimensions "L" and "W" are measured on the ditch as shown on the plan.

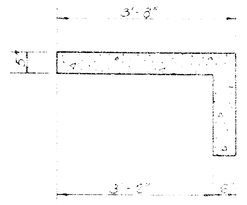


SPACING DIAGRAM
Same for each type.

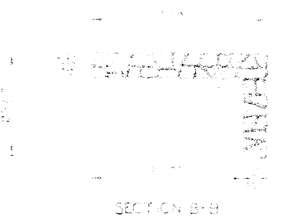


SECTION A'-A'
With Toe Wall
TYPE 5-T

Note: Type 1-T or 5-T wash checks shall be used on the lowest unit in each row. Additional locations where these units are to be constructed shall be designated by the Engineer.



SECTION B'-B'
With Toe Wall
TYPE 5-T



SECTION B-B
TYPE 5

Where check is placed on a grade of more than 4% the top of the check shall be level.

TABLE OF SPACING *Same for each type*			
(A-B)	Spacing	(A-B)	Spacing
1	100'	6	17'
1.5	67'	6.5	15.5'
2	50'	7	14'
2.5	40'	7.5	13'
3	33'	8	12.5'
3.5	29'	8.5	12'
4	25'	9	11'
4.5	22'	9.5	10.5'
5	20'	10	10'
5.5	18'		

S = Spacing of units in feet (10' min.).
A = Per cent grade of ditch.
B = Per cent at which washing is expected to stop. This will vary with the type of soil, etc.
H = Height of drop at each unit.

$$S = \frac{100\,H}{(A-B)}\ (10'\ \text{min.})$$

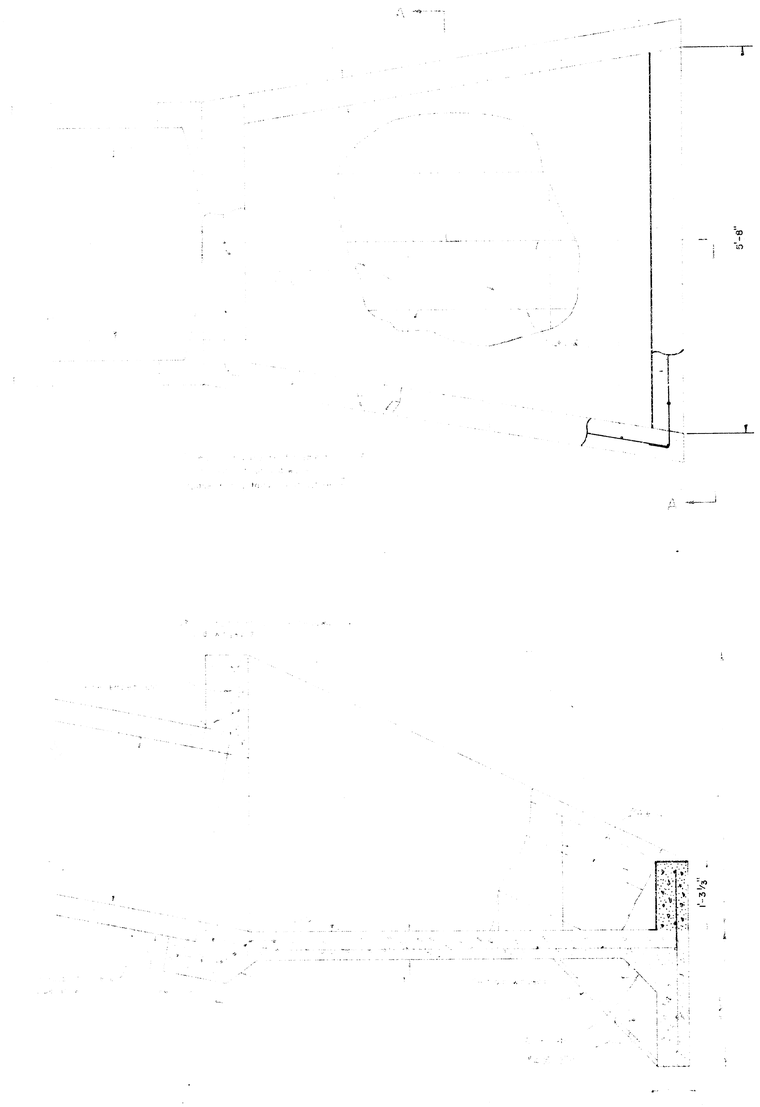
FORMULA

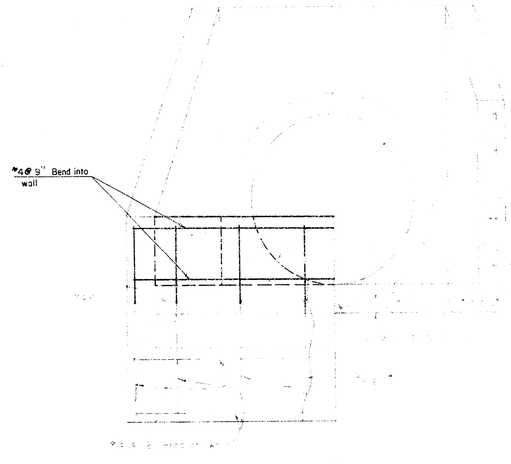
KANSAS DEPARTMENT OF TRANSPORTATION

WASH CHECKS
TYPE 1 & TYPE 5

STD. NO. 206

5





SECTION A-A

K.H.B.
FEB. 79
78-226

SOIL SAVER FOR R.C. CULVERT

6a
11